## AMENDMENTS TO THE DRAWINGS

The attached sheets of drawings includes changes to Figures 5A, 5B, 6A, 6B and 7 in light of the objection noted in the Office Action.

Attachment: Replacement sheet
Annotated sheets showing changes

## REMARKS

Applicants thank the Examiner for the thorough consideration given the present application. Claims 1-6 and 8-26 are pending in the present application. Claims 1, 3, 5, 8-12 and 14-19 have been amended, claims 22-26 have been added and claim 7 has been canceled by the present amendment. The Examiner is respectfully requested to reconsider his rejections in view of the Amendments and Remarks as set forth hereinbelow.

### Allowable Subject Matter

Applicants thank the Examiner for indicating claim 18 would be allowable if rewritten in independent form. In light of this indication, claim 18 has been rewritten in independent form.

### Claim for Priority

It is gratefully acknowledged that the Examiner has recognized the Applicants' claim for foreign priority. Because the Applicants' claim for foreign priority has been perfected, no additional action is required from the Applicants at this time.

### Information Disclosure Statement

The Examiner has acknowledged the Information Disclosure Statement (IDS) submitted on May 31, 2005, but has objected to the IDS filed on May 16, 2006, because the Chinese Office Action submitted with the IDS was not listed on the PTO-SB08 form. In light of this indication, enclosed is an updated PTO-SB08 form including the Chinese Office Action and the cited reference. A copy of the cited reference and Chinese Office Action are not enclosed as they were previously filed. Accordingly, it is respectfully requested the Examiner consider the reference and English translation of the Chinese Office Action.

### Oath/Declaration

The Office Action objects to the oath/declaration because it does not identifiy the citizenship of each inventor. Accordingly, a substitute Declaration will be filed in due course. Therefore, it is respectfully requested this objection be withdrawn.

Drawings

The Office Action objects to Figures 5A, 5B, 6A and 6B as being unclear copies. It is respectfully noted Figures 5A, 5B, 6A and 6B have been deleted from the present application. Original Figure 7 has also been amended to be Figure 5. The Specification has also been appropriately updated. Accordingly, it is respectfully requested the objection to the drawings be withdrawn.

Specification Changes

In addition, the specification has been amended to make the changes noted in the Office Action. Accordingly, it is respectfully requested the objection to the specification be withdrawn.

Claim Objection

In addition, claim 19 has been amended to address the objection noted in the Office Action. Accordingly, it is respectfully requested this objection also be withdrawn.

Rejections Under 35 U.S.C. § 102

Claims 1-4 stand rejected under 35 U.S.C. § 102(b) as anticipated by Ruscheweyh '786. This rejection is respectfully traversed.

Amended independent claim 1 includes a combination of elements and is directed to a flow spreading mechanism including at least one inlet through which a fluid flow is introduced, a flow separating means for separating the fluid flow introduced through the at least one inlet into at least two fluid flows, and an outlet for discharging at least two of the at least two fluid flows to an outside of the flow spreading mechanism. The at least two fluid flows are divided by the flow separating means and joined together at a joining point thereafter. Further, the outlet is located adjacent to the joining point where the at least two fluid flows are joined together such that the fluid flow being discharged through the outlet swings while proceeding due to complex vortices caused by the at least two fluid flows being joined together at the joining point.

These features are supported at least by Figures 1-4 and page 7, lines 7-9. For example, Figure 4 illustrates a flow spreading mechanism having an inlet 200, a flow separating means

110 and an outlet 300. In addition, the outlet 300 is located adjacent to the joining point where the at least two fluid flows are joined together such that the fluid flow being discharged through the outlet swings while proceeding due to complex vortices caused by the at least two fluid flows being joined together at the joining point (see in particular page 7, lines 7-9). Thus, by placing the outlet adjacent to the joining point, it is possible to obtain a maximum fluid spreading effect by the flow generated by the interference between the complex vortices and swinging while proceeding (see page 7, lines 4-7). Figures 1-3 also illustrate the outlet being located adjacent to the joining point where the at least two fluid flows are joined together.

On the contrary, as shown in Figures 1, 3 and 4 of Ruscheweyh '786, the fluid flows $Q_1$ and $Q_2$ are introduced into the conduit 1 and intersect with an insert element 3 arranged at an angle with respect to the flow direction so as to produce eddy impulses which spread out downstream within the main conduit 1 transversely to the direction of flow to form a discreet eddy system as show in Figure 1 (see column 5, lines 3-21, for example). As shown in these figures, the outlet is not located adjacent to a joining point where the fluid flows are joined together. This is because Ruscheweyh '786 is not interested in capturing the complex vortices caused by flows being joined together and using this advantage to discharge a fluid flow to the outlet that swings while proceeding as in the present invention.

Accordingly, it is respectfully submitted independent claim 1 and each of the claims depending therefrom patentably define over Ruscheweyh'786.

Claims 1, 5-7, 9 and 19 stand rejected under 35 U.S.C. § 102(b) as anticipated by Ruscheweyh '108. This rejection is respectfully traversed.

Similar comments apply to this rejection as that discussed above with respect to Ruscheweyh '786. That is, as shown in Figures 2-5 of Ruscheweyh '108, the outlet is not located adjacent to a joining point where fluid flows are joined together as in the present invention.

Accordingly, it is respectfully submitted independent claim 1 and each of the claims depending therefrom also patentably defines over Ruschewey '108.

Rejections Under 35 U.S.C. § 103(a)

Further, it is respectfully noted dependent claim 12 has been rewritten in independent form. Therefore, comments will be presented distinguishing independent claim 12 over the rejection of claim 12 under 35 U.S.C. § 103(a) as unpatentable over Ruscheweyh '108 in view of Ruscheweyh '786 noted in item 28 of the Office Action at page 12.

In more detail, independent claim 12 recites that an interval between the plate and the outlet is set smaller than the width of the outlet such that the flow path from both sides of the plate to the outlet function as nozzles. These features are supported at least by Figure 4 and the corresponding description in the specification, which illustrates an interval ($H_1$) between the plate 110 and the outlet 300 being set smaller than the width ($D_2$) of the outlet 300 such that the flow path from both sides of the plate 110 to the outlet 300 function as nozzles.

The Office Action relies on Figure 7 of Ruscheweyh '786 as disclosing the claimed interval. However, as shown in Figure 7 of Ruscheweyh '786, an interval between the inserting member 3 and the outlet which discharges fluid to an outside of the conduit one is much greater than the width of the outlet. Therefore, it is respectfully submitted independent claim 12 and each of the claims depending therefrom are also allowable.

Further, there are other numerous rejections of the dependent claims under 35 U.S.C. § 103(a). It is respectfully submitted each of these rejections have been overcome because the claims rejected therein are dependent claims and because the additional references by Nawa et al., Rydahl, and Sugawara et al. also do not teach or suggest the features recited in currently amended independent claim 1.

New Claims

In addition, new claims 22-26 have been added to set forth the invention in a varying scope, and Applicants submit the claims are supported by the originally filed specification. In particular, new claim 22 is similar to independent claim 1, but has been drafted not to use means-

plus as function terminology and to be varying in scope. Dependent claims 23-26 illustrate features shown in Figures 2-4, for example. It is respectfully submitted these claims are allowable for similar reasons as discussed above.

## CONCLUSION

In view of the above remarks, it is believed that the claims clearly distinguish over the patents relied on by the Examiner, either alone or in combination.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact David A. Bilodeau at (703) 205-8072, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

By

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FIG. 5

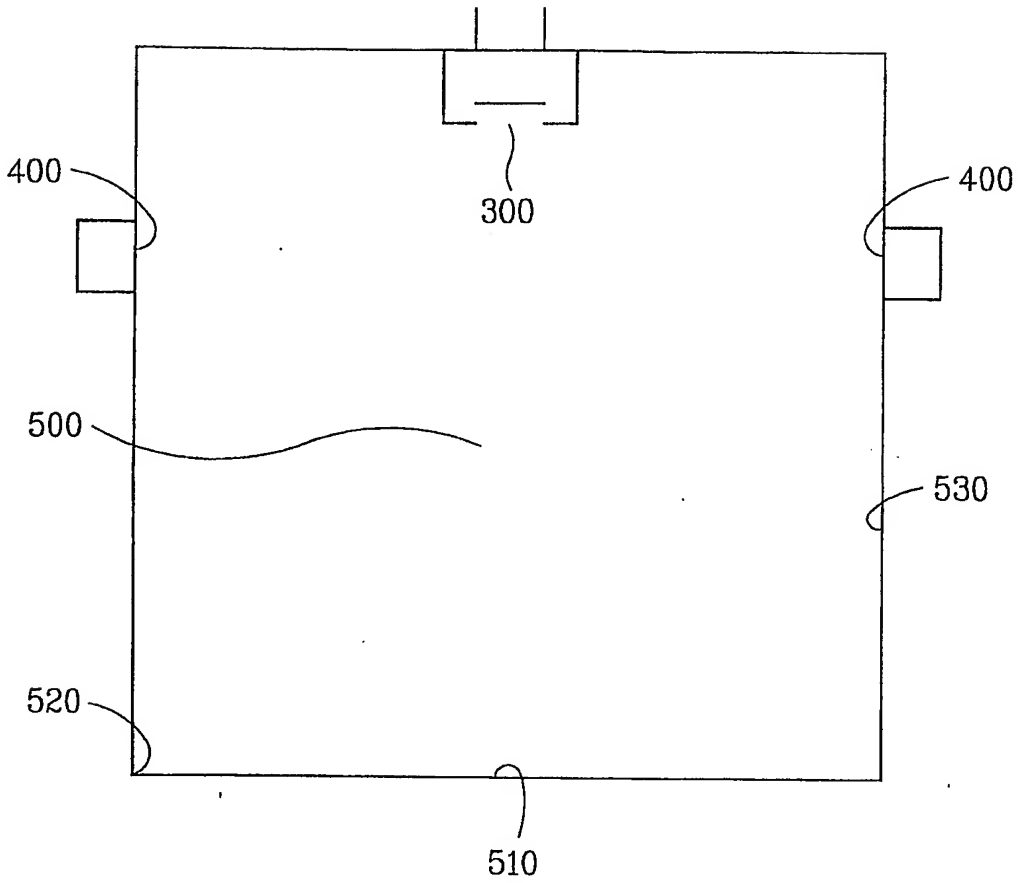

FIG. 5A

delete Figure

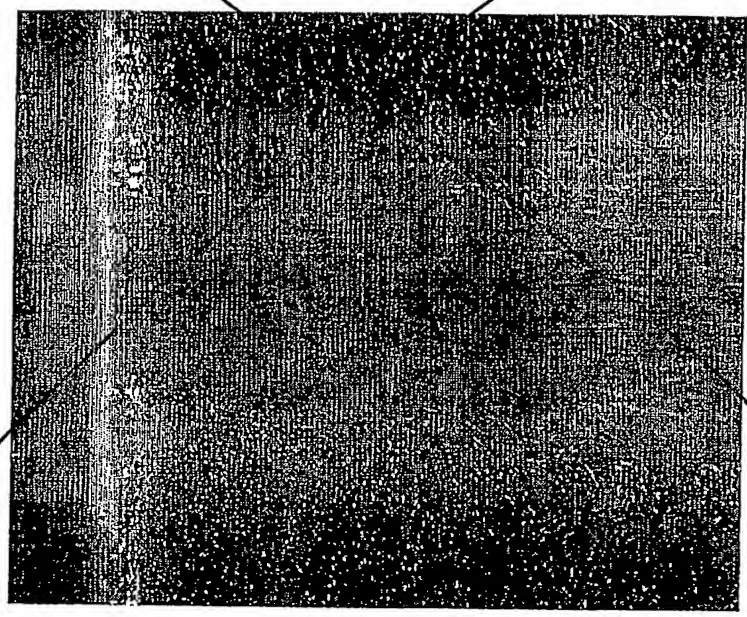

FIG. 5B

delete Figure

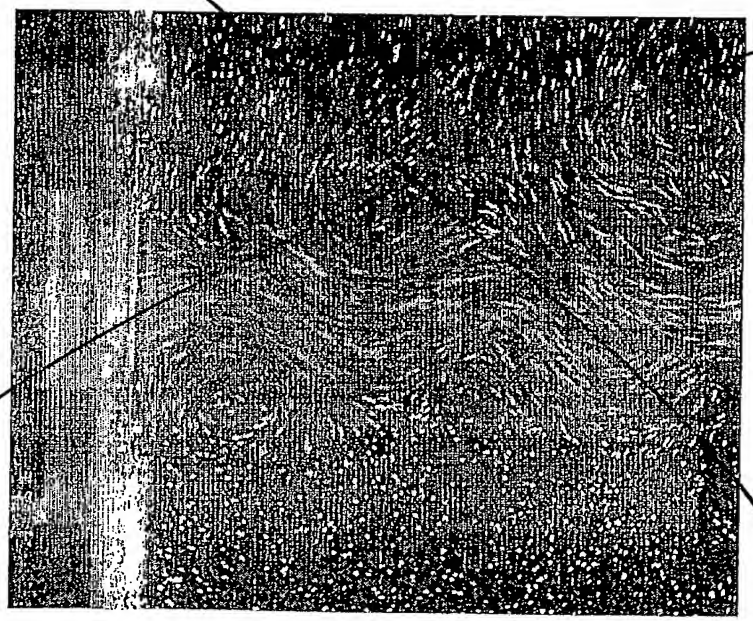

FIG. 6A

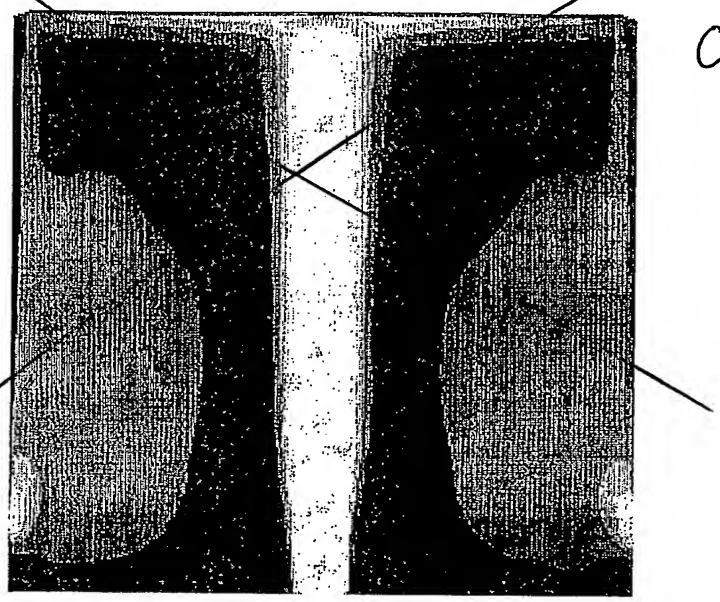

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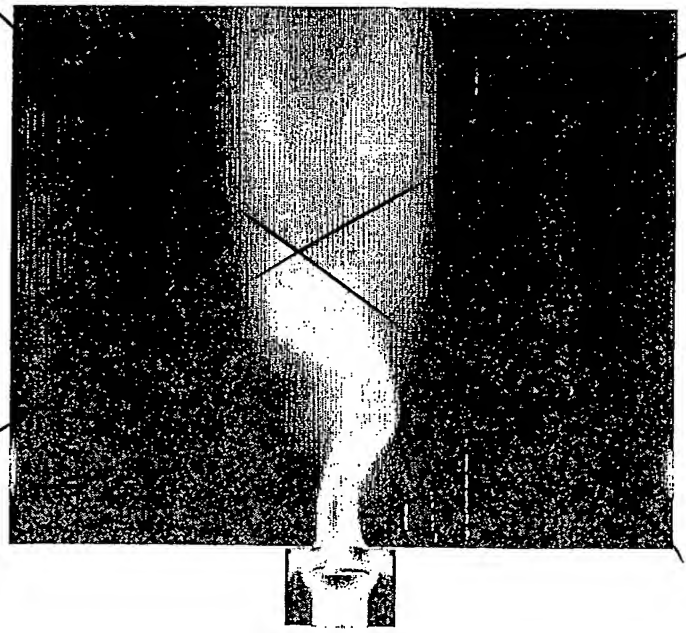
FIG. 6B



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